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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,512	02/08/2002	Tod M. Woolf	SRI-014	3457

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EXAMINER	
ASHEN, JON BENJAMIN	

ART UNIT	PAPER NUMBER
1635	

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/071,512	WOOLF, TOD M.	
	Examiner	Art Unit	
	Jon B. Ashen	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-42 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 2, 5-18 and 33-35 are drawn to a method for delivering a ligand or ligands, to a cell, wherein the ligand is an oligonucleotide, classifiable in class 435, subclass 455.

II. Claims 3, 8-18 and 33-35 are drawn to a method for delivering a ligand or ligands, to a cell, wherein the ligand is a peptide, classifiable in class 424, subclass 143.1.

III. Claims 4, 8-18 and 33-35 are drawn to a method for delivering a ligand or ligands, to a cell, wherein the ligand is a fluorescent virus, classifiable in class 424, subclass 93.1.

IV. Claims 20 and 23-32 are drawn to a method for releasing ligands from endosomes in cells at a localized site in a subject, wherein the ligands are fluorescent oligonucleotides, classifiable in class 435, subclass 455.

V. Claims 21 and 26-32 are drawn to a method for releasing ligands from endosomes in cells at a localized site in a subject, wherein the ligands are fluorescent peptides, classifiable in class 424, subclass 143.1.

VI. Claims 22 and 26-32 are drawn to a method for releasing ligands from endosomes in cells at a localized site in a subject, wherein the ligands are fluorescent viruses, classifiable in class 424, subclass 93.1.

VII. Claim 37 is drawn to a method of enhancing protein production at a localized site in a subject, classifiable in class 424, subclass 143.1.

VIII. Claim 38 is drawn to a method of inhibiting protein production at a localized site in a subject, classifiable in class 435, subclass 375.

IX. Claim 40 is drawn to a method of enhancing protein activity at a localized site in a subject, classifiable in class 424, subclass 143.1.

X. Claim 41 is drawn to a method of inhibiting protein activity at a localized site in a subject, classifiable in class 424, subclass 143.1.

XI. Claim 42 is drawn to a method of treating a disorder comprising enhancing the availability of a ligand that provides a treatment for a disorder, classifiable in class 435, subclass 968.

2. Claim 1 link(s) inventions of groups I-III. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s), claim 1. Claim 19 link(s) inventions of groups IV-VI. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s), claim 19. Claim 36 link(s) inventions of groups VII and VIII. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s), claim 36. Claim 37 link(s) inventions of groups IX-X. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s), claim 37. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer

applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

3. Claims 8-18 and 33-35 are generic to groups I-III. Claims 26-32 are generic to groups IV-VI. These claims will be examined limited to the subject matter of the group elected.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions of groups I-III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The invention of group I is a method of delivering an oligonucleotide ligand to a cell. The invention of group II is a method of delivering a peptide ligand to a cell. The invention of group III is a method of delivering a fluorescent viral ligand to a cell. In the instant case the different inventions are not disclosed as capable of use together and have different modes of operation. Methods of delivering the ligands of the claimed invention, that are oligonucleotides, peptides and fluorescent viruses, will comprise distinct steps, methodologies and materials, which demonstrates that each method has a different mode of operation. Each invention is a method of delivering a structurally and functionally divergent material to a cell and will require different formulations of said materials in buffers, for example, to provide either an oligonucleotide ligand, a peptide ligand or a fluorescent virus ligand to a cell.

Additionally, although groups I-III are all drawn to methods of delivering a ligand or ligands to cells, the ligands encompassed by each group, that are oligonucleotides, peptides and fluorescent viruses, are not disclosed as having a common utility and do not share a substantial structural feature disclosed as being essential to that utility.

Furthermore, searching the inventions of groups I-III would impose a serious search burden. In the instant case, prior art searches of oligonucleotide ligands, peptide ligands and fluorescent virus ligands are not coextensive. Search of each of these inventions would require different key words of divergent patent and non-patent literature databases and subsequent in-depth analysis of unrelated prior art literature, placing a serious burden on the Office in terms of both search and examination of the unrelated prior art. As such, it would be burdensome to perform examination of the inventions of groups I-III together.

5. Inventions of groups IV-VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The invention of group IV is a method for releasing fluorescent oligonucleotide ligands from endosomes in cells. The invention of group V is a method for releasing fluorescent peptide ligands from endosomes in cells. The invention of group VI is a method for releasing fluorescent viral ligands from endosomes in cells. In the instant case the different inventions are not disclosed as capable of use together and will have different modes of

operation. Methods for releasing ligands from endosomes in cells wherein said ligands are fluorescent oligonucleotides, fluorescent peptides or fluorescent viruses, all operate by releasing structurally and functionally divergent ligands from endosomes. Each of these methods relies on different and distinct method steps that target the ligand of interest to appropriate cell receptors, allowing uptake into endosomes and demonstrating that each method utilizes, perforce, a different mode of operation for each product to be taken up by a cell. Additionally, although groups IV-VI are all drawn to methods of releasing ligands into cells, the ligands encompassed by each group, that are oligonucleotides, peptides and fluorescent viruses, are not disclosed as having a common utility and do not share a substantial structural feature disclosed as being essential to that utility.

Furthermore, searching the inventions of groups IV-VI would impose a serious search burden. In the instant case, prior art searches of oligonucleotide ligands, peptide ligands and fluorescent virus ligands are not coextensive. Search of each of these inventions would require different key words of divergent patent and non-patent literature databases and subsequent in-depth analysis of unrelated prior art literature, placing a serious burden on the Office in terms of both search and examination of the unrelated prior art. As such, it would be burdensome to perform examination of the inventions of groups IV-VI together.

6. Inventions of groups VII and VIII unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they

have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The invention of group VII is a method of enhancing protein production at a localized site in a subject. The invention of group VIII is a method of inhibiting protein production at a localized site in a subject. In the instant case the different inventions are not disclosed as capable of use together and have different effects. The effect of the invention of group VII is to enhance protein production at a localized site in a subject, resulting in a greater amount of a protein of interest being present in a specified cellular location. The effect of the invention of group VIII is to inhibit protein production at a localized site in a subject, resulting in a reduction in the amount of a protein of interest at a specified cellular location.

Furthermore, searching the inventions of groups VII and VIII would impose a serious search burden. In the instant case, prior art searches of a method of enhancing protein production and a method of inhibiting protein production are not coextensive. Search of each of these inventions would require different key words of divergent patent and non-patent literature databases and subsequent in-depth analysis of unrelated prior art literature, placing a serious burden on the Office in terms of both search and examination of the unrelated prior art. As such, it would be burdensome to perform examination of the inventions of groups VII and VIII together.

7. Inventions of groups IX and X unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have

different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The invention of group IX is a method of enhancing protein activity at a localized site in a subject. The invention of group X is a method of inhibiting protein activity at a localized site in a subject. In the instant case the different inventions are not disclosed as capable of use together and have different effects. The effect of the invention of group IX is to enhance protein activity at a localized site in a subject, allowing the protein of interest greater activity and therefore, greater effect, in a specified cellular location. The effect of the invention of group X is to inhibit protein activity at a localized site in a subject, reducing the effect of the activity of a particular protein of interest at a specified cellular location.

Furthermore, searching the inventions of groups IX and X would impose a serious search burden. In the instant case, prior art searches of a method of enhancing protein activity and a method of inhibiting protein activity are not coextensive. Search of each of these inventions would require different key words of divergent patent and non-patent literature databases and subsequent in-depth analysis of unrelated prior art literature, placing a serious burden on the Office in terms of both search and examination of the unrelated prior art. As such, it would be burdensome to perform examination of the inventions of groups IX and X together.

8. Inventions of groups I-III and IV-VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they

have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The inventions of groups I-III and IV-VI are outlined above. In the instant case the different inventions are not disclosed as capable of use together and will have different effects. The inventions of groups I-III will have the effect of delivering a ligand or ligands to a cell, allowing delivery of compounds of the invention only to the exterior surface of a cell. The inventions of groups IV-VI will have the effect of releasing ligands from an endosome into a cell at a localized site, providing the compounds of the invention to the interior of the cell.

Furthermore, for the reasons given above in regards to groups I-III and IV-VI, it would be burdensome to perform examination of any of the inventions of groups I-III or IV-VI together.

9. Inventions of groups VII-VIII and IX-X are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The inventions of groups VII-VIII and IX-X are outlined above. In the instant case the different inventions are not disclosed as capable of use together and have different functions. The inventions of groups VII and VIII function to modulate protein production at a localized site in a subject. This function will provide differing amounts of a protein of interest present at a specified cellular region. The inventions of groups IX and X function to modulate protein activity at a localized site in a subject. This

function will cause changes in the effect of a particular protein of interest at a specified cellular region.

Furthermore, for the reasons given above in regards to groups VII-VIII and IX-X it would be burdensome to perform examination of any of the inventions of groups VII-VIII and IX-X together.

10. Inventions of groups I-VI and groups VII-X are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The inventions of groups I-VI and groups VII-X are outlined above. In the instant case the different inventions are not disclosed as capable of use together and have different functions. The function of the methods of groups I-VI is to deliver a ligand or ligands to cells and into cells, thereby providing a compound of the invention either to the exterior or the interior of a cell. The function of the methods of groups VII-X is to modulate protein production or activity, thereby causing a change in the amount or effect of a particular protein of interest at a specified cellular location.

Furthermore, for the reasons given above in regards to groups I-VI and groups VII-X, it would be burdensome to perform examination of any of the inventions of groups I-VI and groups VII-X together.

11. Inventions of groups I-X and XI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they

have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The inventions of groups I-X are outlined previously in this action. The invention of group XI is drawn to a method of treatment. In the instant case, the inventions of groups I-X and XI are not disclosed as capable of use together and have different functions. The function of a method of treatment is to provide a treatment for a disorder as claimed. The function of inventions that are methods of delivering a ligand or ligands to a cell (groups I-III) is to deliver ligands to a cell for any purpose, including for example, a detection assay of particular cell surface receptors. The function of releasing ligands from endosomes in cells at a localized site in a subject (groups IV-VI) is to release ligands into a cell for any purpose, including for example, an in situ hybridization assay for the detection of protein or mRNA expression. Methods of enhancing or inhibiting protein production at a localized site in a subject (groups VII and VIII respectively) function to either enhance or inhibit the production of a particular protein and methods of enhancing or inhibiting protein activity at a localized site in a subject (groups I-IV) function to enhance or inhibit protein activity. Either of the later can function as an assay for increases in particular protein production in response to applied stimuli.

Furthermore, for the reasons given above in regards to groups I-X, it would be burdensome to perform examination of any of the inventions of groups I-X together with the invention of group XI, particularly when considering that the search of a method of treatment would require additional key word searching and in-depth analysis of prior art for distinct steps related only to treatments.

12. Because all of the inventions set forth in this restriction requirement are patentably distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification and would require divergent and burdensome searches and examination of prior art literature using different key words and literature databases, followed by subsequent in-depth analysis of said searches, placing an undue administrative burden on the examiner, restriction for examination purposes as indicated is proper.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon B. Ashen whose telephone number is 571-272-2913. The examiner can normally be reached on 7:30 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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Jba

Jon B. Ashen
Examiner
Art Unit 1635

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